STUDENT FIRST & LAST NAME:_____

SCHOOL:_____ **GRADE:**_____ **ID# / LUNCH#**_____

Christina School District Assignment Board

Grade Level: 5

Week 11 (6.15.20)

	Day 1	Day 2	Day 3	Day 4	Day 5
ELA	Read *The Summer of the Cast.* Write a new ending to the story.	Read *The Summer of the Cast* again to increase fluency. Answer questions 1-5.	Read *The Summer of the Cast* again to increase fluency. Answer questions 6-10.	Nouns are words that identify people, places, and things. Circle all of the nouns in *The Summer of the Cast.*	Start a Summer Bucket List with all of the fun activities you want to do this summer!
Math	**Rob's Review** *Please complete the attached activity titled Rob's Review*	**Array Work** *Please complete the attached activity titled Array Work*	**Thinking About Division** *Please complete the attached activity titled Thinking About Division*	**More Roll Five & Ratio Tables Page 1** *Please complete the attached activity titled More Roll Five & Ratio Tables Page 1*	**More Roll Five & Ratio Tables Page 2** *Please complete the attached activity titled More Roll Five & Ratio Tables Page 2*
Science	**Inventions and Engineering:** Think about, draw and write your best answer to the following: What kinds of inventions do you think we will have when you are a grown up?	**Save Bobby (part 1):** The story of every invention is filled with trying and failing again and again and again. But each time inventors learned from their mistakes and were not afraid to try again and again. You are going to be an inventor and try to invent a way to "Save Bobby": Activity: Get your supplies. You will need bobby pins or paper clips, scissors, and paper, plus the attached handout. Slide bobby pin (or paper	**Save Bobby (part 2):** Draw an idea for your "Bobby Dropper" (something to help the bobby pin or clip fall much slower". Write or label why you think it will work. Take a new piece of paper and make your first Bobby Dropper. You may cut, fold, or tear. Then slide on a bobby pin (clip). Test your invention. Hold a Bobby Dropper in one hand and your Fall Fast in the other. Make sure the pin/clip is at the top. You may want a helper to be	**Save Bobby (part 3):** Make and test another Bobby Dropper. Make sure to use new paper because you want to keep your original one. Test the new Bobby Dropper against the Fall Fast AND the original Bobby Dropper to see which one works better. Test 3 times, holding your invention with the pin/clip starting in 3 different orientations. Complete 2nd handout with new Bobby Dropper.	**Galileo the Thinker and Inventor:** Read the article. Highlight and/or underline something(s) you learned from the article that you want to remember.

STUDENT FIRST & LAST NAME:_____

SCHOOL:_____ **GRADE:**_____ **ID# / LUNCH#**_____

Christina School District Assignment Board

		clip) onto a piece of paper. Carefully crumple paper around the clip. You have made a "Fall Fast". Hold it up as high as you can and drop it. It should fall fast. Think of things that float or fall slowly. Draw a picture of 2-3 things, then think and write: What do you notice about these things? What do you see that might help them float or fall, slowly? (Hint: examples might include leaves, dandelion seeds, etc.) **[Keep Fall Fast for next part]**	your "Expert Eye" and watch the drop. Pay attention to how the Bobby Dropper drops. Notate what happens on your handout. If you worked with a helper, make sure to switch so you can also see the drop. Circle the path it takes on the handout. Now test again, but make sure to hold the Bobby Dropper so the pin/clip is NOT straight up. Repeat investigation and circle path on handout. Try a 3rd time, holding it yet another way. Think and write: Did something fail in one of your drops? What did you learn from that? **[Keep Fall Fast and Bobby Dropper for next part]**	Draw/write your best answers to the following: Which one worked better? Why do you think that? Is there something in real life that is similar to your Bobby Dropper that gave you that idea? Congratulations! You are an inventor!	
Social Studies	Complete Activity 1 from the document titled, "Constitutional Chronicles of Gabi Grosera"	Review Activity 1 from the document titled, "Constitutional Chronicles of Gabi Grosera"	Complete Activity 2, Chronicle 1 from the document titled, "Constitutional Chronicles of Gabi Grosera"	Review Activity 1 and Activity 2, Chronicle 1 from the document titled, "Constitutional Chronicles of Gabi Grosera"	Complete Activity 2, Chronicle 2 from the document titled, "Constitutional Chronicles of Gabi Grosera"

STUDENT FIRST & LAST NAME:_____

SCHOOL:_____ **GRADE:**_____ **ID# / LUNCH#**_____

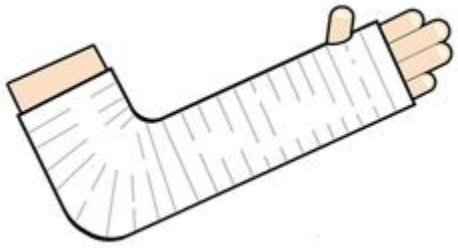
Christina School District Assignment Board

Week 12 (6.22.20)

	Day 6	Day 7	Day 8	Day 9	Day 10
ELA	Read *A Surprise Visit.* Write a summary to tell what happened.	Read *A Surprise Visit* again to increase fluency. Answer questions 1-5.	Read *A Surprise VIsit* again to increase fluency. Answer questions 6-10.	Draw three scenes to show what happened in the beginning, middle, and end of the story.	Finish your Summer Bucket List and have a safe and happy summer!
Math	**Food Project** *Please complete the attached activity titled Food Project*	**Division with Fractions** *Please complete the attached activity titled Division with Fractions*	**Division Practice** *Please complete the attached activity titled DivisionPractice*	**Olympic Swimmers Page 1** *Please complete the attached activity titled Olympics Swimmers Page 1*	**Olympic Swimmers Page 2** *Please complete the attached activity titled Olympics Swimmers Page 2* *Have a great summer and play some games like Uno or Sorry! Make up your own game!*
Science	**Making Rock Candy:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**The Pepper and Soap Experiment:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**How to Make Invisible Ink:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**Make a Walking Water Rainbow:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?	**Make a Lava Lamp:** Enjoy the attached investigation. What do you notice? What do you observe? What do you wonder?
Social Studies	Review Activity 1 and Activity 2, Chronicles 1 and 2 from the document titled, “Constitutional Chronicles of Gabi Grosera”	Complete Activity 2, Chronicle 3 from the document titled, “Constitutional Chronicles of Gabi Grosera”	Review Activity 1 and Activity 2, Chronicles 1, 2, and 3 from the document titled, “Constitutional Chronicles of Gabi Grosera”	Complete Activity 2, Chronicle 4 from the document titled, “Constitutional Chronicles of Gabi Grosera”	Review Activity 1 and Activity 2, Chronicles 1, 2, 3, and 4 AND Have a happy, healthy, and safe summer!

The Summer of the Cast

by James Folta



Oddly, one of the best summers I ever spent was the summer my little sister broke her arm. She broke it toward the end of the school year and spent the warm summer months unable to swim. My sister, Amanda, didn't mind the broken arm so much. She just hated that it kept her from doing her favorite thing: swimming.

Amanda was the happiest swimmer I have ever seen. She seemed more content in water than she did on land. If we spent a day at the beach or at a pool, Amanda would be in the water the entire day. This is not an overstatement-we would arrive and she would lay out her towel, place her flip flops carefully beside it, then walk into the water. When it was time to head home, one of us would have to walk to the water and fetch her. She would pout and protest, then do one last handstand, walk out of the water, and collect her towel and flip flops, still in the exact place she had left them.

It came as a surprise to all of us that Amanda was the first child in our family to break a bone. She was sweet and smart with messy blond hair. She preferred to sit back and puff up her cheeks, watching everything from a distance rather than get involved. She was active, but remarkably careful. She had a sense of danger that kept her from even bruising herself.

I was almost the complete opposite. My only speed was overenthusiastic, reckless sprinting. I couldn't manage all the energy I had and bounced through my childhood like a pinball. I would wake up singing and jumping and go to bed out of breath. I was always happiest when I was a little scratched up.

So we were all shocked that Amanda was the first in a cast and not me. The break happened after school one spring day on the new playground. Amanda was playing on a slider, which is a handle set into a gently inclined track. When you held onto the handle and dangled, you could slide along the track. Of course, it was more exciting to get a push from a friend and slide much faster than gravity would pull you.

Unfortunately, Amanda was pushed on the slider much too hard. Her body jerked to and fro as she sped along, clearly out of control. Finally, Amanda lost her grip and fell, arcing up and forward. She fell like a cat, twisting improbably in the air so that she descended facing the ground. For a moment, it seemed that she would be okay and land safely, but she slammed down hard on all fours, wood chips skidding around her. There was a moment of eerie calm. I expected her to burst into tears, but she just whimpered and rolled over to a sitting position. Her knees were scraped up, and her hands had wood chips stuck to them. But there wasn't any blood. She seemed okay.

We walked home and she complained about her wrist. She cradled it delicately with her other hand, as if it were a very full cup of water, but it didn't seem any more swollen or bruised than her other wrist.

When we got home, Mom could immediately tell something was wrong by our faces. "What happened?" she asked.

Mom reached out and touched Amanda's now swollen wrist. Amanda turned as white as snow and her jaw dropped open in silent pain.

"Your wrist hurts?" Mom asked. Amanda could only nod. Mom quickly whisked us into the car.

When we got inside the doctor's office, we were moved through a waiting room and then into "a checking up room," as Amanda called it. I was excitedly babbling, standing on chairs, reading brochures, and peppering everyone with questions about how x-rays worked. I was completely oblivious to the gravity of the situation. This wasn't a fun field trip. My sister was badly hurt. I don't like thinking back on my lack of care for Amanda. These are the kind of moments of childhood that you look back on and feel a pang of shame and embarrassment in your gut.

The x-rays came back-Amanda's wrist had a hairline fracture along her ulna, a forearm bone, close to her hand.

"Nothing terrible, it'll heal very soon," the doctor said nonchalantly. He didn't even look up from the documents he held before him. We were all anxious and upset. Mom was trying not to cry. I was shocked. Amanda sat calmly.

The doctor applied the cast. It looked like an arts and crafts project, more summer camp than medicine. While he set her arm, the doctor explained everything that Amanda would have to avoid to keep her arm from becoming further injured. Amanda, like I, was fascinated by the process of casting and didn't seem to be paying attention to what the doctor was prescribing.

But at some point she started crying, so quietly that we didn't notice immediately.

"Are you in pain?" Mom asked.

"No."

"Are you uncomfortable?"

"No." But Amanda's face stayed screwed up in pain and discomfort, tears squeezing out of the corners of her eyes. Her legs dangling off the hospital bed kicked restlessly and crinkled the paper pulled across the table she sat on. She was upset but wouldn't say why.

Mom tried to distract Amanda by having her list all the people she wanted to sign her cast. She could only produce names in groups of two or three until she was distracted again by her tears. Mom gave up when the doctor announced that we were all done.

"Any questions?" We shook our heads. Mom signed a few papers, and we were soon back in the car, exhausted and on our way home.

Amanda didn't stop crying, and Mom kept checking in with her, barely able to hold back tears herself.

"Are you in pain?" Mom asked.

"No."

"Are you uncomfortable? Itchy?"

"No."

"Are you sad?"

"Yes," she finally admitted. "I'm not going to be able to swim this summer." She wept even harder after admitting this. In the doctor's directions for care of the cast, he had noted swimming wasn't allowed. Mom and I missed it, but it was the only thing Amanda heard. She had been told that her favorite activity of her favorite season was canceled.

The summer went on. Our fear over Amanda further hurting her arm quickly gave way to a fear of her ruining her cast by plunging it in a pool or diving into the ocean. We became preoccupied with trying to keep Amanda from soaking her cast as she sat by pools the entire summer, staring longingly at the water.

We tried all sorts of things to help her-baths, a kiddie pool in the yard, showers with her cast held out of the curtain. But of course none of this was the same as swimming. Swimming is motion and exploration, not sitting or standing while wet.

We stopped going to pools as often as we used to. I was grouchy about it at first, but then the summer became different. Instead of the usual lazy summer days of swimming and seeing friends, I stayed home more to be with Amanda. We gardened together, staged a play, and, in what would become family lore, we planted a tree that survived both a lightning strike and being hit by a neighbor's car.

When Amanda's arm was finally healed and the cast came off, we threw a big pool party for her and all her friends. As everyone cheered, she jumped back in the pool, swam for six hours straight, and never stopped smiling. It was a great day.

But in the car on the way back home, Amanda was very quiet. After a while, she turned to me and told me how much she missed our garden.

"Maybe we could not go to the pool tomorrow?" she asked.

I told her that sounded very nice.

Name: _____ **Date:** _____

1. What was Amanda's favorite thing?

A. running
B. swimming
C. reading
D. singing

2. What main problem does Amanda face in the story?

A. She does not get along with the rest of her family.
B. She does not want to leave the beach at the end of the day.
C. She cannot manage all of the energy she has.
D. She cannot go swimming because she broke her arm.

3. When she has her cast on, Amanda misses swimming. What evidence from the story best supports this conclusion?

A. At the pool, Amanda stares longingly at the water.
B. Amanda's family stops going to the pool as often.
C. Amanda staged a play and planted a tree.
D. Amanda's family throws a pool party for her and her friends.

4. Why does Amanda start crying at the doctor's office?

A. because she is in a lot of pain
B. because she can't think of anyone to sign her cast
C. because she is tired and wants to go home
D. because she won't be able to go swimming

5. What is the story mostly about?

A. A girl breaks her arm while playing on a slider at the playground.
B. Two siblings learn to love swimming over the course of a summer.
C. A girl who loves swimming discovers an interest in gardening after breaking her arm.
D. Two siblings spend more time together when one of them breaks her arm.

6. Read the following sentences: "I was excitedly babbling, standing on chairs, reading brochures, and peppering everyone with questions about how x-rays worked. I was completely oblivious to the **gravity** of the situation. This wasn't a fun field trip. My sister was badly hurt. I don't like thinking back on my lack of care for Amanda."

As used in this sentence, what does the word "**gravity**" mean?

A. happiness
B. discomfort
C. seriousness
D. excitement

7. Choose the answer that best completes the sentence below.

_____ Amanda loves swimming, she asks her sibling if they could not go to the pool tomorrow.

A. Initially
B. Meanwhile
C. Even though
D. Therefore

8. What did the narrator do during "the summer of the cast" instead of swimming and seeing friends?

_____

_____

_____

9. Why doesn't Amanda want to go to the pool at the end of the story? Use evidence from the text to support your answer.

10. How did Amanda's broken arm impact her relationship with her sibling, the narrator? Use evidence from the story to support your answer.

A Surprise Visit

by ReadWorks

Karina woke up with the sun blasting through her shades. She groggily rolled over and looked at her clock, which read 6:30 a.m. She yawned and crawled out of bed, sticky and sweaty from the humid night. After lazily getting into her bathing suit and grabbing a ripe banana, she swung her backpack on her back and left the quiet house.

The walk to the beach took her half an hour, but it passed by quickly. Tropical birds kept her company, chirping hello from the lush green trees, while neighbors stretching on their front porches waved as Karina passed by. However, once she left her neighborhood and reached the entrance to the tourist resort, the atmosphere completely changed. She began to hear the faint clinking of silverware as the servers set up for breakfast. Early risers from the hotel strolled along the beach, taking pictures of the unforgettable sunrise. The resort was full all year, as Bali is a famous tourist destination-one island of many in the country of Indonesia, in Southeast Asia. Indonesia is located just below the Philippines and above Australia.

Many tourists come to Bali to surf, as the Indian Ocean provides the perfect waves for the sport. But Karina lived near Lovina Beach, famous for its dolphins. As she walked along the resort's beach, she smiled to people she passed by. Just as the sun was rising above the horizon, she reached a small shack located to the right of the resort, where visitors could come and sign up for water sports, such as surfing or parasailing, where one dangles from a flying parachute connected to a boat as it drives over the water.

Karina dropped off her things, then ran back to the beach to her lifeguard chair. She climbed up and took her position for the day, where she would watch the resort's guests frolic in the

water and look out for any potential danger. Some days she would grow bored, watching the same people do the same things over and over again. The job was quite repetitive, but she received steady pay, something that allowed her to continue living on the beautiful island.

The sun climbed in the sky, and the temperature rapidly increased. Just as Karina turned on a small portable fan to cool herself, someone began yelling in the water. Karina immediately jumped off her chair and ran toward the shore. She soon realized the person was yelling "shark." Her stomach dropped. She had never experienced a shark sighting before but knew that she should get everyone out of the water. Even though people were already swimming and running toward the sand, she began to pull people out of the water and assisted young children who couldn't move quickly enough. All the while she kept her eyes on the blue waves but didn't see any sign of a shark.

Once everyone was safely ashore, she grabbed her binoculars from her lifeguard's chair and peered out over the water. Finally, she spotted a black dot moving around in the waves nearby. She giggled and breathed a sigh of relief. To everyone's shock, she entered the water, slowly getting closer and closer to the dot. She stopped once she was a few feet away from the animal and waited. The black dot moved closer and closer to Karina, and she sank in the water to reach its level. All of a sudden, the animal lifted its snout and made a funny noise.

"It's a dolphin!" one kid yelled from the beach. Karina gave the gentle animal a pat and swam back to the shore. She had plenty of experience with dolphins, as she was training to become a marine biologist. "It's okay, everyone; she's just a curious one," she explained. "Please don't approach her-but it's all right to continue to swim." Everyone laughed and ran back into the ocean.

Karina climbed onto her chair and looked out through her binoculars at the dolphin. This day was certainly not boring. In her mind, she thanked the animal for making a visit and hoped she had returned back to her family safely.

Name: _____ **Date:** _____

1. What is Karina's job?

2. What is the setting of this story?

3. Read this paragraph.

"Karina dropped off her things, then ran back to the beach to her lifeguard chair. She climbed up and took her position for the day, where she would watch the resort's guests frolic in the water and look out for any potential danger. Some days she would grow bored, watching the same people do the same things over and over again. The job was quite repetitive, but she received steady pay, something that allowed her to continue living on the beautiful island."

Based on this information, what can you conclude about Karina's attitude toward living on the island?

4. What is the black dot that Karina sees through her binoculars?

5. What is the main idea of this story?

6. Read these sentences from the story.

"Just as Karina turned on a small portable fan to cool herself, someone began yelling in the water. Karina immediately jumped off her chair and ran toward the shore. She soon realized the person was yelling 'shark.' Her stomach dropped. She had never experienced a shark sighting before but knew that she should get everyone out of the water. Even though people were already swimming and running toward the sand, she began to pull people out of the water and assisted young children who couldn't move quickly enough. All the while she kept her eyes on the blue waves but didn't see any sign of a shark."

What does it mean that Karina's stomach "dropped"?

7. What word or phrase best completes the sentence?

Someone at the beach yells "shark;" _____, people start moving from the water to the sand.

8. What does Karina do after the dolphin lifts its snout and makes a funny noise?

9. Why does Karina decide to enter the water after everyone else has left it? Support your answer with evidence from the story.

10. Why might Karina want to be a marine biologist? (A marine biologist is a person who studies ocean life.) Support your answer with evidence from the story.

Summer Bucket List

○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____
○ _____	○ _____

NAME | DATE

Rob's Review

1 Rob was solving multiplication problems. Write an expression with parentheses to record his thinking for each of the two problems below.

a Rob solved 97×50 by multiplying 100 by 50 and then removing 3 groups of 50.

b Rob solved 25×44 by finding $\frac{1}{4}$ of 44 and then multiplying by 100.

2 Evaluate Rob's two expressions.

a

b

3 Rob saw a friend use the standard algorithm to solve the problem 290×14.

a Solve the problem using the standard algorithm.

b Rob said he thought there was a more efficient way to solve this problem, and suggested his friend use the ratio table below. Fill in Rob's ratio table.

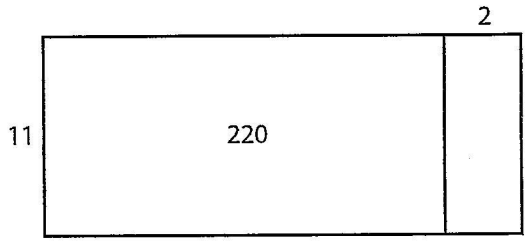
1	2	3	300	10	290
14					

NAME | DATE

Array Work

Fill in the blanks on each array. Then write two equations—one multiplication, and one division—equation, to match the array.

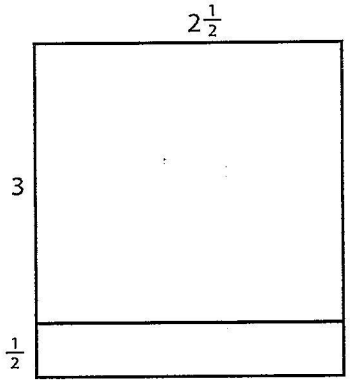
1



_____ × _____ = _____

_____ ÷ _____ = _____

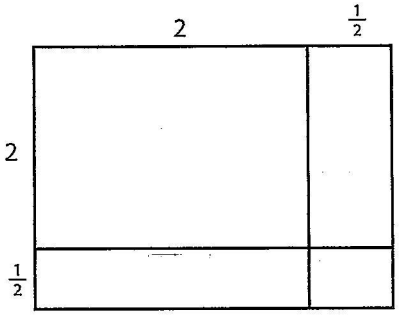
2



_____ × _____ = _____

_____ ÷ _____ = _____

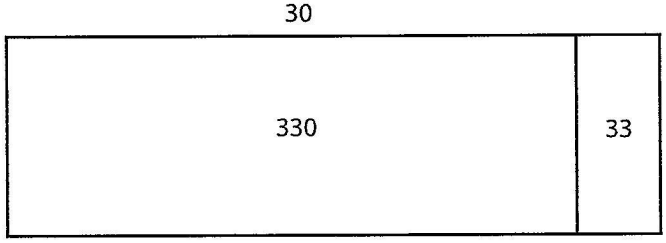
3



_____ × _____ = _____

_____ ÷ _____ = _____

4



_____ × _____ = _____

_____ ÷ _____ = _____

NAME | DATE

Thinking About Division

1 Show your strategy and answer in three ways:

- with a model such as an array or ratio table
- in words
- with an equation

a How can you use 1100 ÷ 11 to help you find 1089 ÷ 11?

b How can you use 900 ÷ 9 to help you find 936 ÷ 9?

2 Look at the five division problems below. Before you solve them, decide if any of the problems have the same quotient. Explain how you know, and then solve each one.

a 42 ÷ 7 =

b 420 ÷ 7 =

c 420 ÷ 70 =

d 4,200 ÷ 70 =

e 4,620 ÷ 70 =

3 Mariana needs to solve the problem 588 ÷ 42. She prefers to think about division as multiplication. She begins by thinking, "I know 10 groups of 42..." Create a ratio table to model Mariana's thinking and solve the problem.

NAME | DATE

More Roll Five & Ratio Tables page 1 of 2

Victor and Juan were playing Roll Five. They have to add, subtract, multiply or divide any of the digits on their five dice to reach their target number. Players are awarded 1 point for each digit used.

1 Victor's target number is 18. He rolled the digits 2, 2, 6, 7, and 9.

a Victor knows he can record 2×9 to make 18, but he wants to find another expression that will give him a higher score. Record an expression Victor could use.

b What is Victor's score?

c Victor thinks he can start with 7, subtract 2, subtract another 2, and then multiply by 6 to get 18. Juan says that the expression Victor recorded, $7 - 2 - (2 \times 6)$, does not reach 18. How can Victor rewrite his expression so that he gets a total of 18?

d What is Victor's score?

2 Juan's target number is 36. He rolled the digits 2, 4, 2, 5, and 8.

a Juan says that 4 less than 8 times 5 is 36. Write an expression to record his thinking, and then solve the problem to see if Juan gets his target number.

b Record another equation Juan could use to reach his target number.

3 Later, Victor was solving the problem $483 \div 21$. He started the ratio table below. Complete the ratio table to find the quotient. Add to Victor's ratio table as needed.

1	2	3	10		
21					483

$483 \div 21 =$ _____

(continued on next page)

NAME | DATE

More Roll Five & Ratio Tables page 2 of 2

4 Victor also needed to solve 870 ÷ 30. Help him by filling in the ratio table below to solve 870 ÷ 30.

1	2	4	10		
30					870

870 ÷ 30 = _____

5 Find the quotient of 608 ÷ 32. Model your thinking with a rectangular array or an area model.

6 Fill in chart below to round each number to the nearest one, tenth, and hundredth.

Number	Rounded to Nearest One	Rounded to Nearest Tenth	Rounded to Nearest Hundredth
1,765.087			
398.393			
110. 099			

7 **CHALLENGE** Annie needed to solve 855 ÷ 19. She thought she would solve 855 ÷ 20 and then adjust, since 20 is an easier number to work with than 19. Can she solve the problem this way? Why or why not? Explain your thinking.

NAME | DATE

Food Project

The Sellwood Community Center wants to donate hot dogs to the Southeast Portland Food Project, and they want to find the best deal.

1 At Food Mart, hot dogs can be purchased in packages of 8 for $2.40 or packages of 12 for $3.00. Which is a better buy? Explain how you know.

2 At Food World, hot dogs are sold in packages of 24 for $5.76 or packages of 50 for $12.00. Which is a better buy? Explain how you know.

3 The community center organizers want to buy 600 hot dogs. What will the cost be if they purchase the packages with the best buy? Show your thinking.

4 Six blocks of neighbors in Sellwood and Westmoreland donate food to the Southeast Portland Food Project. The table below shows how many pounds of food each block donated during the last 12 months. Fill in the table to show how many pounds of food each block donated per month.

Donations to the Southeast Portland Food Project		
Block	**Pounds of Food Donated in 12 Months**	**Pounds of Food Donated per Month**
1	192	
2	216	
3	144	
4	138	
5	174	
6	210	

NAME | DATE

Division with Fractions

1 Alice is filling candy molds with chocolate for her brother's birthday party. It takes her 6 minutes to fill $\frac{1}{5}$ of the molds. How long will it take her to fill all of the molds? Complete the ratio table to show the answer.

minutes	6	
molds filled	$\frac{1}{5}$ of the molds	all the molds

2 Alice is filling cupcake molds with old, melted crayons to make new crayons for her brother's party. If it takes her 9 minutes fill $\frac{1}{4}$ of the molds, how long will it take her to fill all the molds? Show your thinking on a ratio table.

3 Write a story problem for the expression $14 \div \frac{1}{2}$. Then solve the problem.

NOTE Remember that $14 \div \frac{1}{2}$ means, *"How many halves are there in 14?"*

NAME _____ DATE _____

Division Practice

1 Mr. Lee's classroom has 966 markers. His 28 students need to share the markers equally so everyone can work on an art project. How many markers should each student get?

a Solve the problem. Show your work.

b Between which two whole numbers does your answer lie? _____ and _____

c Write an equation to represent the problem and the answer.

d Explain what you did with the remainder, if any, and why.

2 Mr. Lee brought 70 granola bars for his students to share. Three students were absent. How many granola bars can each of his 25 students have?

a Solve the problem. Show your work.

b Between which two whole numbers does your answer lie? _____ and _____

c Write an equation to represent the problem and the answer.

d Explain what you did with the remainder, if any, and why.

NAME _____ DATE _____

Olympic Swimmers page 1 of 2

For each problem, first estimate the answer and then solve the problem. Show your thinking using words, numbers, or labeled sketches.

1 In the 2012 Olympics, U.S. athlete Nathan Adrian finished the 100-meter freestyle swim in 47.52 seconds. If Nathan swam at the same pace in a regular 25-meter pool, what would his time have been per lap?

Estimate _____ Answer _____

2 Dana Vollmer set a world record in the 100-meter butterfly finals in London. Her time was 55.98 seconds. If Dana swam at the same pace in a 25-meter pool, what would her time be per lap?

Estimate _____ Answer _____

3 Missy Franklin competed in seven Olympic swimming events and posted five gold medals in London. Her time in the 100-meter backstroke was 58.33 seconds. If Missy swam at the same pace in a 25-meter pool, what would her time be per lap?

Estimate _____ Answer _____

(continued on next page)

NAME _____ DATE _____

Olympic Swimmers page 2 of 2

4 In London in 2012, Michael Phelps won a gold medal for the 100-meter butterfly with a time of 51.21 seconds. If Michael had been swimming that event in a 25-meter pool, what would his time have been per lap?

Estimate _____ Answer _____

5 **CHALLENGE** In the men's 400-meter relay, each of 4 team members swims a 100-meter leg for a total of 400 meters swum. One team swam the relay with a total time of 3 minutes and 29.32 seconds.

a If each of the four members of the team posted the same time, what would their individual times be? (Hint: Think about how long it took the swimmers to swim each leg of the relay.)

Estimate _____ Answer _____

b An Olympic pool is 50 meters long, so in the 400-meter relay, each team member swims two 50-meter laps. If each member of this team swam their first lap just as fast as their second lap, how long did it take to swim each lap?

Estimate _____ Answer _____

 Name: _____

Inventing a Bobby Dropper

Draw your ideas here:

Congratulations on your failed inventions!

Inventors experiment, test their invention, then try to make it better. Keep track of your discoveries below.

Draw your Bobby-Dropper (and the Bobby pin):	Circle the path that shows how it fell.	Results:
Version 1	 other (draw it)	It worked well It didn't work well
Version 2	 other (draw it)	It worked well It didn't work well
Version 3	 other (draw it)	It worked well It didn't work well
Version 4	 other (draw it)	It worked well It didn't work well

If you want to keep inventing, keep taking notes on the back.

 Name: _____

Inventing a Bobby Dropper

Draw your ideas here:

Congratulations on your failed inventions!

Inventors experiment, test their invention, then try to make it better. Keep track of your discoveries below.

Draw your Bobby-Dropper (and the Bobby pin):	Circle the path that shows how it fell.	Results:
Version 1	 other (draw it)	It worked well It didn't work well
Version 2	 other (draw it)	It worked well It didn't work well
Version 3	 other (draw it)	It worked well It didn't work well
Version 4	 other (draw it)	It worked well It didn't work well

If you want to keep inventing, keep taking notes on the back.

Galileo the Thinker and Inventor

This text is adapted from an original work of the Core Knowledge Foundation.

If Galileo Galilei, the astronomer, were alive today as an elementary school student, he would likely be a student who was constantly raising his hand in class to ask questions, offer opinions, and point out places where he thought the textbooks were wrong. Galileo grew up in a time when the ideas and writings of Aristotle and other ancient Greek and Roman scholars were revered. But Galileo did not hesitate to question authority. As a university student, his questioning nature even earned him the nickname "The Wrangler" because he asked so many questions and challenged many of Aristotle's theories about the way things worked in the natural world. It didn't help that he also had a reputation for being rather rude and arrogant! Yet although Galileo could be annoying, he was also very observant and had a gift for solving problems by conducting simple, but clever, experiments.

A Mathematical Mind

Galileo was born in Pisa, the Italian city now famous for its leaning tower. While studying medicine at the University of Pisa, he became fascinated by mathematics. Learning about it became an obsession, to the point where he abandoned his medical studies. He eventually became a mathematics professor at the University of Pisa. The job didn't pay well, but it suited Galileo's inquisitive mind and gave him the freedom to continue challenging ancient beliefs with experiments.

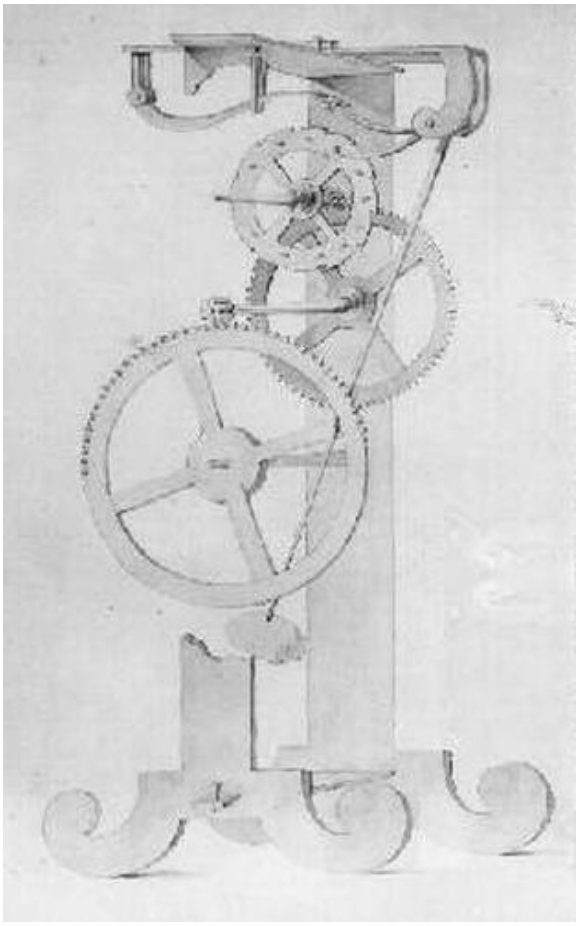
For example, in Galileo's time people believed that if you dropped two objects of different weights, the heavier object would fall faster and hit the ground first. They believed it because the scholar Aristotle had said so in his writings about how gravity worked. According to Aristotle, an object that weighs 10 pounds should fall 10 times faster than an object that weighs one pound.

But the more Galileo thought about this, the more he thought Aristotle was wrong. According to an account written by one of Galileo's students (which may or may not be true), Galileo decided to test Aristotle's theory on the Tower of Pisa. He climbed to the top with two metal balls-one small and one large. If Aristotle was correct about falling objects, Galileo said, the larger, heavier ball should strike the ground first. But Galileo believed that all objects, regardless of their weight, fall at the same rate. So, from the top of the tower, the story goes, Galileo released the balls while students and professors watched from below. Down the balls fell-and struck the earth with a thump at the exact same instant.

Nikolic Djordje (CC BY-SA 4.0)

Galileo on the Tower of Pisa

Even if Galileo didn't drop metal balls from the tower, his notebooks show that he conducted other experiments in which he dropped objects or rolled them down slanted surfaces. He then used mathematics to analyze the results of the experiments and draw conclusions about how gravity worked based on evidence. The significance of Galileo's gravity experiments went beyond learning more about this force, however. He'd proved that Aristotle was wrong, that a long-held belief simply wasn't true.



Galileo's pendulum clock, 1642 CE

Galileo went on to perform many other scientific experiments. He turned some of his discoveries into clever inventions. For example, he studied the steady motion of pendulums and ended up designing the first pendulum clock. He created a simple thermometer that could register changes in temperature. He invented a compass used for aiming canons so they could more accurately fire cannonballs.

It was with the telescope, though, that Galileo made his most important discoveries. He is sometimes mistakenly credited with inventing the telescope. He didn't-but he improved on the original design and built telescopes with increasingly high magnifying power. Thanks to his telescopes, and discoveries made by the Polish astronomer Nicolaus Copernicus, Galileo toppled the idea that the earth was at the heart of the solar system.

Making Rock Candy:

This easy rock candy recipe lets kids observe the crystallization process firsthand while making some pretty delicious treats. Sugar, water, and few more items found at home are all you need to turn your kitchen into a rock candy laboratory.

Step 1: How to Make Rock Candy
Gather your ingredients and tools. All you need is water, sugar, a clothespin, a pot for boiling, and a few wooden sticks to grow rock candy crystals in your kitchen! You might pick out a food color dye, too. We chose red. For the "sticks," we picked up a few bamboo skewers from the grocery store.

Step 2: Create your sugar solution
Bring two cups of water to a boil in a large pot on the stove. Next, stir in four cups of sugar. Boil and continue stirring until sugar appears dissolved. This creates a supersaturated sugar solution. This is also the time to add in any flavor enhancements, such as vanilla or peppermint and so on. Allow the solution to cool for 15-20 minutes.

Step 3: Prepare sticks for the candy
While waiting for the solution to cool, prepare your wooden sticks for growing the rock crystals. Wet the wooden sticks and roll them around in granulated sugar. Make sure you allow the sugared sticks to completely dry before continuing to Step 4. You'll need one stick per jar.

Step 4: Add in a food color of your choice
Once the sugar solution is cool, add in food coloring to create rock candy of your preferred color. Leave this step out for clear-colored crystals.

Step 5: Pour the cooled solution into a jar for the final candy-making process
Pour the cooled solution into a glass jar (or jars) and insert the sugar-covered wooden stick into the center of the glass. Make sure that the stick is not touching any part of the jar. If it does, the candy crystals could get stuck to the bottom or to the sides. You can divide the sugar solution across several smaller jars or use one large mason jar, depending on how many sticks of rock candy you'd like to make.

Once in place, secure the stick in place using a clothespin. Cover the top of the glass with a paper towel. You may have to poke a hole in the paper towel for the wooden stick to poke through.

Step 6: Let the candy crystals grow in a quiet, dark place

Place the glass in a cool and quiet place. Loud noises and a lot of movement can disturb the crystal making process. Every day, the candy crystals will grow larger. They will reach their maximum growth potential by two weeks. When you have a good amount of rock candy crystals, remove the stick and place it on a sheet of wax paper to dry...before eating!

Our rock candy took at least two weeks to grow, and fyi, it turned out more pink than red!

The Pepper and Soap Experiment

Read on to learn how to chase the "pepper" germs away!

You will need:

A shallow bowl or dish (a pie plate works well if you have one), water, ordinary black pepper, and some liquid dish soap.

Step 1

Cover the bottom of your shallow dish with water.

Step 2

Sprinkle black pepper across the surface of the water. Note how the surface tension of the water causes the pepper flakes float.

Step 3

Stick your finger in the center of the dish; did anything happen? Not much right? You probably just got some pepper flakes stuck to your finger. Now imagine that the pepper flakes are germs

Step 4

Now dip the tip of your finger into the liquid dish soap—you don’t need much.

Step 5

Now stick that finger into the center of the dish. What happens? Your soapy finger chased those pepper flakes to the edges of the plate! Dish soap is formulated to break the surface tension of water, which is why it is so effective on greasy, dirty dishes. And it wasn’t until you added soap to the bowl that those "germs" were chased away. This is the reason grown-ups are always nagging you to wash your hands with soap!

How to Make Invisible Ink

This low-tech invisible ink science experiment lets kids send secret messages to friends and family. All they'll need is a little lemon juice or milk. We decided to try both versions of this invisible ink experiment to see if the results were any different.

Commonly found household items make up the ingredient list, including juice, milk, honey, and vinegar. At room temperature, these compound liquids are colorless, making them perfect for invisible ink fun. Put them in contact with heat and the oxidization process turns them various shades of brown, aka, the ink appears! Read on for step-by-step instructions on how to make invisible ink with your kids.

We used milk and lemon juice to create our invisible ink.

Step 1

Gather your ingredients and tools. For this experiment, you need a piece of paper, a cotton swab, a heat source (a lamp or electric stove works), and milk or lemon.

Draw or write your secret message.

Step 2

If you are using lemon juice, squeeze your lemon into a glass. You can mix it with a little bit of water. Dip your cotton swab into the milk or lemon juice and start writing your message. Let your message dry completely.

Apply heat to get the secret message to appear.

Step 3

Once dry, an adult should hold the sheet of paper over a heat source. We used an electric stovetop. You can also use a lamplight or blow-dryer.

Your messages will appear like magic!

Step 4

As the milk or lemon “ink” heats up, it will oxidize and turn brown. You can try this experiment with other substances such as vinegar, honey, or orange juice.

Make a Walking Water Rainbow

Nothing brightens up a day like making your own rainbow! For this colorful science experiment, kids get to create their own mini rainbow while learning about capillary action.

You will need:

7 wide mouth jars or drinking glasses, food coloring (the 3 primary colors red, yellow, and blue), water, scissors, and paper towel (the thicker the better--we used thinner paper towels and the experiment took a lot longer). But don't worry: no matter how long it takes, the magic will happen!

Step 1: The Jars
Arrange the 7 jars in a line.

Step 2: The Water
Fill **every other** jar starting with the first about 3/4 of the way up with water. (We used less water and it took longer, so don't be shy with the water and the food coloring.)

Step 3: The Color
Add the food coloring. If you have the 7 jars arranged in a line, add a healthy squirt of red to the first **and** the last jar, yellow to the third jar, and blue to the fifth jar. Only the jars with water get the food coloring. So: red, skip a jar, yellow, skip a jar, blue, skip a jar, then red again.

Step 4: Fold The Paper Towels
Fold 6 paper towels in half and then in half again so you have long, thin paper towels. Really crease those folds! Next, fold one of the long paper towels in half length-wise so it's half the size. Depending on how tall your jars or glasses are, you'll want to cut a good inch or inch and a half off the end with scissors. You don't want the paper towels to stick up in the air too much. Repeat that step 5 more times with each of the remaining paper towels.

Step 5: Place Paper Towels in the Jars
Put one end of a folded paper towel in the first jar and the other end in the second jar. Take another and put one end in the second jar and the other end in the third jar. Repeat until you have a zigzag of paper towels going from the first jar to the last.

Step 6: Watch the Magic Happen!
The colored water is traveling up the narrow paper towel **against gravity**, using a process called capillary action. The water is pulled up through tiny gaps between the fibers in the paper towel, wicking each color up out of one jar and down into the next. The once empty jars are now filling up with the 2 colors from the jars on each side and mixing!

Make a Lava Lamp

A simple science experiment can be the best way to fill an afternoon at home. And as some of us may recall, a lava lamp can be a great way to fill an evening.

For this groovy experiment, kids get to recreate their parents' lava lamp while learning about liquid density.

Read on to learn how to prove that oil and water really don't mix!

You will need:

A wide bottle (or a fancy drinking glass or wide glass vase), food coloring, vegetable oil, water, and an Alka-seltzer tablet (make sure you have parent help as needed)

Step 1: The Oil

Fill the container about 3/4 with vegetable oil. You can choose the size of the container based on how much vegetable oil you have to spare.

Step 2: The Water

Fill the rest of the container with water, leaving 2-3 inches at the top. Watch the water fall through the vegetable oil and settle at the bottom. Can you believe that water is more dense than oil? Water molecules are "polar" and oil molecules are "non-polar", so they are not attracted to each other in the least.

Step 3: The Color

What color would you like the "lava" in your lava lamp to be? After the water has settled for a minute or so, add you food coloring. We added about 10 drops. Watch as each drop falls through the oil and sits on top of the water layer. Wait until all of the water droplets break through the oil/water line and burst into the water.

Step 4: The Bubbles

Drop your Alka-seltzer tablet in and let the games begin! The Alka-seltzer water reaction produces carbon dioxide gas bubbles which stick to the water droplets. The water/gas combo is less dense than the vegetable oil, so they rise to the top. The gas bubbles then break and are released into the air and the water sinks back down to the bottom to start over again!

The Constitutional Chronicles of Gabi Grosera

Social Studies Home Learning Activities

Standard Benchmark **Civics 3a**	Students will apply the fundamental rights and protections of American citizens guaranteed in the Bill of Rights to everyday situations.
Grade Band	4-5
Vocabulary/Key Concepts	Apply, Bill of Rights, constitutional, unconstitutional, assemble

Activity 1: Read - Understanding Our Rights as American Citizens

The Bill of Rights were added to the United States Constitution to protect the individual rights of American citizens from the enormous powers that our Founding Fathers granted to our national government. They feared that government might use some of its powers to take away people's rights. Some of the protections in the Bill of Rights guarantee us freedom of speech, religion, and the press. Others guarantee citizens the rights to petition our government, to share our written opinions in newspapers, and to assemble or gather together with other people to share ideas peaceably.

American citizens are very lucky to have these rights and protections.

But some people think that these rights have no limits. For example, some people think that, since we have freedom of speech, we can say anything we want.

The fact is, there are limits to what we can say or do even if the Constitution lists what we say or do as our rights. The word for this is "*scope*". The word *scope* is used to describe how far we have the right to do or say something before it gets to the point where we are no longer allowed to do it. If there are no limits on our rights, people can get hurt.

- Can you think of an example that describes someone exercising a right in a way that causes someone else to get hurt?

_____

_____

Sometimes people do or say things because they *believe* that they have a right to do or say them. But, people with authority sometimes have to step in and order them to stop. Sometimes those with authority are even allowed to punish citizens for doing and saying things even though they are listed as our rights.

Luckily, the Bill of Rights also guarantees American citizens the right to a fair trial. People who believe that they have been wrongly accused or punished can "take their case to court". A judge can then decide whether the actions taken by government officials were constitutional (allowed under our Constitution) or unconstitutional (not allowed under our Constitution). If the accusations and punishments are unconstitutional, the person who has been accused is considered innocent and cannot be punished.

Check for Understanding

1. Which rights of American citizens are described in the reading?

_____

_____

_____

2. What does it mean when someone says that our rights have "scope"?

_____

_____

3. Why are there limits on our rights as American citizens?

_____

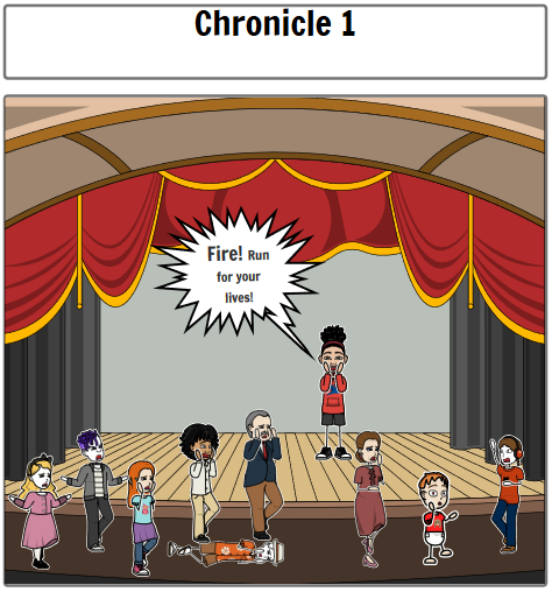
_____

_____

Activity 2: You Be the Judge

There are four cases or "Chronicles" described below. Each chronicle describes actions taken by a fictional American citizen named Gabriela Grosera, and other actions taken by government officials – people with authority. Acting as

judge, decide whether the actions taken by the government officials are constitutional or unconstitutional. Be sure to explain your decisions.



The Constitution guarantees American citizens the right to freedom of speech.

Gabriela Grosera went to the movies last Saturday. The theater was very crowded. Gabriela thought the movie was boring and wanted some excitement. She stood up and shouted, "FIRE" even though she knew that there was no fire. Everyone rushed to the doors to escape. The crowd knocked Gabi's friend Ricky to the ground. Ricky suffered a very painful boo boo on his nose.

Government authorities took Ms. Grosera into custody and fined her $13. Gabi argues that the fine was unconstitutional because she has the right to free speech. Ricky disagreed.

Are the government's actions <u>constitutional</u> or <u>unconstitutional</u> (circle one)**?**

Explain why: _____

_____

_____

_____

Chronicle 2

The Constitution guarantees American citizens the right to assemble peaceably.

Gabriela Grosera was upset because the city where she lives passed a law saying that it is illegal for children under the age of 12 to ride skateboards in the street. Gabi is 11 years old. She made a poster protesting the new law. It read, "I will ride my skatebored anywhere I want!" and stood in the middle of the street with her sign and skateboard shouting "honk your horn if you support me." The first car to pass by was a police car. Ooops!

Officer Grunion removed Ms. Grosera from the street and fined her $13. Gabi argues that the fine was unconstitutional because she has the right to assemble peaceably.

Are the actions of the police <u>constitutional</u> or <u>unconstitutional</u> (circle one)**?**

Explain why: _____

_____

_____

_____

Chronicle 3

The Constitution guarantees American citizens the right to freedom of the press.

Gabriela Grosera is a very feisty young lady. After learning that the mayor of her city created a new tax on sodas, she wrote a letter to the local newspaper. The letter stated that the mayor was "a sourpuss who should be doing more importent things than putting taxes on my favorite bevrage."

Authorities from the mayor's office mailed Ms. Grosera a ticket for $13. It stated that she was fined for writing a letter that criticized "Mayor Sourpuss." Gabi argues that the fine was unconstitutional because she has the right to express her opinions in a newspaper.

Are the actions of the authorities <u>constitutional</u> or <u>unconstitutional</u> (circle one)**?**

Explain why: _____

_____

_____

_____

Chronicle 4

The Constitution guarantees American citizens the right to create a petition asking government officials to do or not do something.

Gabriela Grosera has some unusual ideas! She believes that children should only have to go to school one day per week. She created a petition demanding one day of school and got her only two friends to sign it. Gabi then glued the petition on the door of a local lawmaker's home. She used a lot of glue (and tape)! The lawmaker had to replace her door, and had a hard time removing her hand from that door.

The next day Ms. Grosera received an official document stating that she had to go to court. On judgment day, Judge Amorduro ordered Gabriela to do community service. Specifically, she had to visit the local lawmaker's house once a month for 13 months to polish her new door so that it would be nice and shiny.

Gabi argued quite boldly that the punishment was unconstitutional because the 1st Amendment states that she has the right to petition her government.

Are the actions of the judge <u>constitutional</u> or <u>unconstitutional</u> (circle one)**?**

Explain why: _____

_____

_____

_____